DOE/RW--0380P

TI93 004888

Quarterly Report on Program Cost and Schedule

Fourth Quarter FY 1992

***U.S. Department of Energy
Office of Civilian Radioactive Waste Management
Washington, DC 20585***

MASTER

DISTRIBUTION OF THIS DOCUMENT IS UNLIMITED

8P

PURPOSELY LEFT BLANK

PREFACE

This report is intended to provide a summary of the cost and schedule performance for the Civilian Radioactive Waste Management Program. Historical and current cost profiles (extracted from the DOE Financial Information System) are presented for each of the major program elements. Also included in this report are the program schedule baseline, the status of near-term program milestones and the status of the Nuclear Waste Fund revenues and disbursements. This report includes data through September 1992.

DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, make any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

DISCLAIMER

Portions of this document may be illegible in electronic image products. Images are produced from the best available original document.

PURPOSELY LEFT BLANK

TABLE OF CONTENTS

	<u>Page</u>
1. COST AND SCHEDULE HIGHLIGHTS	1
2. NUCLEAR WASTE FUND OVERVIEW	
Receipts, Disbursements and Net Balance Projections	2
Cost Profile for Total Nuclear Waste Fund	4
3. PROGRAM SCHEDULE	6
Program Schedule Baseline	7
Near-Term Milestone Summary	9
4. FIRST REPOSITORY	
Cost Profiles	10
5. TRANSPORTATION	
Cost Profile	16
6. MONITORED RETRIEVABLE STORAGE	
Cost Profile	18
7. SYSTEMS INTEGRATION	
Cost Profile	20
8. ENGINEERING DEVELOPMENT	
Cost Profile	22
9. PROGRAM MANAGEMENT/TECHNICAL SUPPORT	
Cost Profile	24

PURPOSELY LEFT BLANK

SECTION 1. COST AND SCHEDULE HIGHLIGHTS

- The following are selected major milestones from the Operations Management Tracking System that were reported as complete for the fourth quarter of FY92.

Yucca Mountain Site Characterization Project

- Started ESF First Design Package 90% Design Review (July 1992)
- Started Readiness Review for Start of Site Preparation (August 1992)
- Completed Ramp Sizing Study (September 1992)
- Started Readiness Review for Start of Waste Package Advanced Conceptual Design (September 1992)
- Started Readiness Review for Start of Repository Advanced Conceptual Design (September 1992)

- Actual FY92 costs for the total Nuclear Waste Fund through the fourth quarter were \$329.4 million. Breakdown of cost by program element is as follows:

- Total First Repository costs - \$201.5 million (\$189.4 million for the Yucca Mountain Site Characterization Project and the remainder for basalt and salt closeout, technical support and repository technology program activities).
- Transportation - \$16.7 million
- MRS - \$21.5 million
- Systems Integration - \$13.8 million
- Engineering Development - \$6.4 million
- Program Management/Technical Support - \$69.5 million

SECTION 2. NUCLEAR WASTE FUND OVERVIEW

RECEIPTS, DISBURSEMENTS AND NET BALANCE PROJECTIONS

Projection of Receipts and Disbursements

- For FY 1983 through FY 1990, receipts were actual amounts collected from utilities while disbursements included actual disbursements and interest paid on the appropriated debt. The appropriated debt was repaid in FY 1985. Receipt and disbursement projections for FY 1992 through FY 1994 are based on information contained in the FY 1993 Congressional budget submission.

Projected Net Balance

- The current net balance projection (September 1992) assumes the revenues from the 1 mill per kWh fee contained in the Energy Information Administration projection dated September 1991. Revenues from the one time fee and earned interest are extracted from the FY 1993 Congressional budget submission. Disbursements for FY 1992 through FY 1994 assume the budget outlay estimates contained in the FY 1993 budget submittal.
- The January 1985 and February 1986 projections are provided to show the effect of the one-time payment for fuel generated before 1983. The January 1985 projection assumed that \$770 million would be received in June 1985 for the one-time payment while the February 1986 projection reflects the fact that \$1.4 billion was actually collected.
 - The February 1986 net balance projection assumed the cost estimates, revenues (both from the 1 mill per kWh fee and the one-time fee), and earned interest contained in the FY 1987 budget submittal.
 - The January 1985 net balance projection was based on revenue and cost projections (escalated to current dollars by an average annual growth rate of 5 percent per year) in the FY 1986 budget submitted to Congress. The projection of net balance assumed that a positive yearly balance earns interest at a rate of 7 percent per year.

PROJECTED NUCLEAR WASTE FUND

RECEIPTS & DISBURSEMENTS (AS OF 9/92)

PROJECTED NET BALANCE

OF WASTE FUND

COST PROFILE FOR TOTAL NUCLEAR WASTE FUND

- FY92 actual costs through the fourth quarter for the Nuclear Waste Fund were \$329.4 million.
- Through the fourth quarter of FY92, cumulative actual costs (from FY83) for the entire program totaled \$3,327.4 million.

COST PROFILE FOR TOTAL NUCLEAR WASTE FUND

HISTORICAL

(ENTRIES MAY NOT ADD TO TOTAL DUE TO INDEPENDENT ROUNDING)

SECTION 3. PROGRAM SCHEDULE BASELINE

- Figure 1 represents the current program schedule as contained in the Program Cost and Schedule Baseline (PCSB), Revision 3. This schedule was approved by the OCRWM Program Change Control Board on September 10, 1992.

LEGEND:
 ☆ - ESAAB Milestone / Secretary Decision
 ⇓ - PCB Milestone

ABBREVIATIONS:
 ACD: ADVANCED CONCEPTUAL DESIGN
 EA: ENVIRONMENTAL ASSESSMENT
 EIS: ENVIRONMENTAL IMPACT STATEMENT
 ESF: EXPLORATORY STUDIES FACILITY
 FPC: FINAL PROCUREMENT AND CONSTRUCTION
 LA: LICENSE APPLICATION
 LAD: LICENSE APPLICATION DESIGN
 MRS: MONITORED RETRIEVABLE STORAGE
 NRC: NUCLEAR REGULATORY COMMISSION
 RFP: REQUEST FOR PROPOSAL
 ROD: RECORD OF DECISION
 SAR: SAFETY ANALYSIS REPORT
 SRR: SITE RECOMMENDATION REPORT
 UZ: UNSATURATED ZONE

Figure 1. Program Cost and Schedule Baseline - Rev.3
 Milestones Subject to Change Control

PURPOSELY LEFT BLANK

NEAR-TERM MILESTONE SUMMARY

- The following milestones were completed during the fourth quarter FY92 as reported in the Operations Management Tracking System.

Program Support

- Completed YMP ICE Reconciliation (September 1992)
- RW-30 Submitted Next Iteration of Annotated Outline for MRS LA to NRC (September 1992)
- RW-30 Submitted Next Iteration of Annotated Outline for MGDS LA to NRC (September 1992)

Yucca Mountain Site Characterization Project

- Issued Fifth Site Characterization Progress Report Covering 4/1/91 to 9/30/91 (July 1992)
- Started ESF First Design Package 90% Design Review (July 1992)
- Started Readiness Review for Start of Site Preparation (August 1992)
- Completed Ramp Sizing Study (September 1992)
- Started Readiness Review for Start of Waste Package Advanced Conceptual Design (September 1992)
- Started Readiness Review for Start of Repository Advanced Conceptual Design (September 1992)

Transportation

- Completed Final Report on Independent Assessment of Cask System Development Program (September 1992)

SECTION 4. TOTAL FIRST REPOSITORY

COST PROFILE

- FY92 actual costs through the fourth quarter for the first repository were \$201.5 million. The distribution by project was \$189.4 million for the Yucca Mountain Site Characterization Project, \$11.4 million for technical support/repository technology program (RTP) activities, \$0.9 million for the basalt project (BWIP) closeout, and \$-0.2 million for the salt project (SRP) closeout.
- Through the fourth quarter of FY92, cumulative actual cost (from FY83) for the first repository projects totaled \$2,399.9 million of which 52 percent (or \$1,244.5 million) was accounted for by YMP, 21 percent (or \$514.2 million) by SRP, 20.5 percent (or \$483.1 million) by BWIP, and 6.5 percent (or \$158.1 million) by technical support/RTP activities.

COST PROFILE FOR TOTAL FIRST REPOSITORY

HISTORICAL

(ENTRIES MAY NOT ADD TO TOTAL DUE TO INDEPENDENT ROUNDING)

COST PROFILES

BWIP

SRP

COST PROFILE FOR YMP

HISTORICAL

(ENTRIES MAY NOT ADD TO TOTAL DUE TO INDEPENDENT ROUNDING)

COST PROFILE FOR TECHNICAL SUPPORT/RTP

HISTORICAL

(ENTRIES MAY NOT ADD TO TOTAL DUE TO INDEPENDENT ROUNDING)

PURPOSELY LEFT BLANK

SECTION 5. TRANSPORTATION

COST PROFILE

- FY92 actual costs through the fourth quarter were \$16.7 million.
- Through the fourth quarter of FY92 the cumulative costs since 1984 were \$119.9 million.

COST PROFILE FOR TRANSPORTATION

HISTORICAL
(ENTRIES MAY NOT ADD TO TOTAL DUE TO INDEPENDENT ROUNDING)

SECTION 6. MONITORED RETRIEVABLE STORAGE

COST PROFILE

- FY92 actual costs for the MRS through fourth quarter were \$21.5 million.
- Through the fourth quarter of FY92, the cumulative costs since 1983 were \$68.8 million.

COST PROFILE FOR MRS

HISTORICAL

(ENTRIES MAY NOT ADD TO TOTAL DUE TO INDEPENDENT ROUNDING)

SECTION 7. SYSTEMS INTEGRATION

COST PROFILE

- FY92 actual costs for combined systems integration activities through the fourth quarter were \$13.8 million.
- Through the fourth quarter of FY92, the cumulative costs since 1985 were \$65.6 million.

COST PROFILE FOR SYSTEMS INTEGRATION

HISTORICAL

(ENTRIES MAY NOT ADD TO TOTAL DUE TO INDEPENDENT ROUNDING)

SECTION 8. ENGINEERING DEVELOPMENT

COST PROFILE

- Work on engineering development is administered through the Idaho Operations Office.
- FY92 actual costs through the fourth quarter for the engineering development activities were \$6.4 million.
- Through the fourth quarter of FY92, the cumulative costs since 1985 were \$52.9 million.

COST PROFILE FOR ENGINEERING DEVELOPMENT

HISTORICAL

(ENTRIES MAY NOT ADD TO TOTAL DUE TO INDEPENDENT ROUNDING)

SECTION 9. PROGRAM MANAGEMENT/TECHNICAL SUPPORT

COST PROFILE

- Activities include program management (federal salaries, benefits, and travel); contractual services (administrative support costs); and technical support (i.e., NWF audit services and fee verification, technical support activities, program integration, external relations and policy); and debt service.
- FY92 actual costs through the fourth quarter for the program management/technical support activities were \$69.5 million.
- Through the fourth quarter of FY92, the cumulative costs since 1983 were \$539.1 million (includes NRC fees).

COST PROFILE FOR PROGRAM MANAGEMENT/TECHNICAL SUPPORT

HISTORICAL

(ENTRIES MAY NOT ADD TO TOTAL DUE TO INDEPENDENT ROUNDING)